



Regulatory and Legislative Development Highlights

Our mission is to enable EM sites to package and transport EM radioactive material and waste in full compliance with all applicable regulations.

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Office of Environmental Management (EM)

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Final Rules- Effective October 1, 2010

Modification of current transport security plan requirements (HM-232F): The Pipeline and Hazardous Materials Safety Administration (PHMSA), in consultation with the Department of Homeland Security's Transportation Security Administration, has modified current security plan requirements for commercially transporting hazardous materials by air, rail, vessel, and highway. The final rule narrows the list of materials subject to security plan requirements based on evaluating security threats for specific types and quantities of hazardous materials. The final rule also clarifies certain requirements for security planning, training, and documentation. The final rule will become effective October 1, 2010. The Office of Packaging and Transportation (EM-45) has incorporated security plan requirements in its Motor Carrier Evaluation Program Plan and Procedures (DOE-MCEP-2009). The plan is used in evaluating motor carriers contracted by DOE sites for transporting certain radioactive materials, hazardous waste, and other materials determined by the Nuclear Regulatory Commission (NRC) to be Radioactive Material in Quantities of Concern. Please contact (EM-45) or visit the Federal Register web site for details: <http://www.archives.gov/federal-register/index.html>

Miscellaneous Packaging Amendments (HM-231): PHMSA, in this final rule, has revised a number of current packaging regulations including changing the definition of bulk packaging (49 CFR171.8) potentially impacting requirements for radioactive material packaging. This issue was discussed at the annual Packaging Management Council meeting held on June 21, 2010, in

Portland, OR. The final rule goes into effect on October 1, 2010. HM-231 also amends regulations for packaging closure instructions, marking, shipper's responsibility, and documenting methodology for determining whether a packaging configuration change requires retesting as a new design, or may be considered a variation of a previously tested design. EM-45 will work with the Department of Transportation (DOT) to resolve the bulk packaging definition issue. Please contact EM-45 or visit the Federal Register web site for HM-231 details: <http://www.archives.gov/federal-register/index.html>

Revision of Requirements for Emergency Response Telephone Numbers (HM-206F): PHMSA will require basic identifying information (offeror name or contract number in case of third party arrangement) be included on shipping papers: "This information will enable the emergency response information provider to identify the offeror on whose behalf it is accepting responsibility for providing emergency response information in the event of a hazardous materials incident and obtain additional information about the hazardous material as needed." The final rule goes into effect on October 1, 2010.

News from the International Atomic Energy Agency

Transport Safety Standards Committee Meeting: EM-45 participated in the International Atomic Energy Agency (IAEA) Transport Safety Standards Committee (TRANSSC-20) meeting held in Vienna, Austria, from June 14-18, 2010. TRANSSC is a standing body of senior regulatory officials and technical experts providing advice to the IAEA Secretariat on regulatory aspects of

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transport safety, and has the primary role in developing and revising the Agency's transport safety standards. Sixty five participants from 24 Member States and 6 International Organizations attended the 20th TRANSSC meeting. The Committee reviewed a number of working papers and presentations concerning the proposed revision to TS-R-1 (2009) requirements. TS-R-1 (20xx) is scheduled for publication in 2012. The new addition will also incorporate many changes in transport regulations to harmonize with the United Nations Recommendations on the Transport of Dangerous Goods. TRANSSC-20 decided to send the revised TS-R-1 20xx for a 120 day Member State comment period.

DOT and NRC jointly issued a Federal Register notice on July 1, 2010, seeking public comments on the draft TS-R-1 20xx. The proposed revision to fissile exceptions in TS-R-1 could have significant affect on transporting DOE radioactive waste containing fissile nuclides. Below, for your review, are excerpts from the draft TS-R-1 20xx on the proposed definition of fissile nuclides and fissile material, and rules for allowing fissile exceptions:

222. *Fissile nuclides* shall mean uranium-233, uranium-235, plutonium-239 and plutonium-241. *Fissile material* shall mean a material containing any of the *fissile nuclides*. Excluded from the definition of *fissile material* are any of the following:

- (a) Material containing only *natural uranium or depleted uranium* which is unirradiated; if packaged, there shall be no other material with *fissile nuclides* in the package.
- (b) Material in packages containing *natural uranium or depleted uranium* which has been irradiated in thermal reactors only and there shall no other *fissile nuclides* in the package.
- (c) Material in *packages* each containing up to 0.25 g of *fissile nuclides* in any form.

417. *Fissile material* and *packages* containing *fissile material* shall be classified under the relevant entry as FISSILE according to Table 1 unless excepted by one of the provisions of subparas (a) – (f). Only one of the provisions of (a)-(f) is allowed per *consignment*. All provisions apply to only packaged material unless unpackaged material is specifically allowed in the provision.

- (a) Uranium enriched in uranium-235 to a maximum of 1% by mass, and with a total plutonium and uranium-233 content not exceeding 1% of the mass of uranium-235, provided that the *fissile nuclides* are distributed essentially homogeneously throughout the material. In addition, if uranium-235 is present in metallic, oxide or carbide forms, it shall not form a lattice arrangement.
- (b) Liquid solutions of uranyl nitrate enriched in uranium-235 to a maximum of 2% by mass, with a total plutonium and uranium-233 content not exceeding 0.002% of the mass of uranium, and with a minimum nitrogen to uranium atomic ratio (N/U) of 2.
- (c) Uranium in *packages* the smallest overall external dimension of which is not less than 10 cm, provided that the *consignment* is limited to 45 g of uranium-235 with a total plutonium and uranium-233 content not exceeding 1% of the mass of

uranium-235 and one of the following conditions is met:

- (i) There is no more than 3.5 g of uranium-235 per *package* where the uranium is enriched in uranium-235 up to a maximum of 5% by mass, or
- (ii) There is no more than 2.0 g uranium-235 per *package* where the uranium is enriched in uranium-235 to a value greater than 5% by mass.
- (d) *Fissile nuclides* of plutonium and uranium with a total mass not greater than 0.5 g per *package* and 15 g per *consignment*.
- (e) Up to 45 g per *conveyance* of *fissile nuclides* under exclusive use either packaged or unpackaged.
- (f) Other materials that meet the requirements of para 605bis subject to *multilateral approval*. Only one such material is allowed per *consignment* unless specifically subject to *multilateral approval*.

The present U.S. regulations do not include de minimis exception in the fissile material definition. Draft TS-R-1 20xx incorporates significant changes in current fissile exception regulations. The flow down of IAEA requirements into U.S. domestic and international regulations is well recognized. These changes, when implemented in U.S. domestic regulations, will have significant positive impact on packaging and transporting EM waste containing fissile nuclides.

Please provide your comments to EM-45 by September 30, 2010. Working in coordination with program offices and sites, we will submit comments to DOT by October 29, 2010. Comments can also be submitted to DOT through the Federal eRulemaking Portal: <http://www.regulations.gov>.

The 16th International Symposium on the Packaging and Transportation of Radioactive Material-PATRAM 2010:

This highly recognized premier international conference will be held October 3-8, 2010, in London, UK. PATRAM 2010 is hosted by the Department for Transport of the United Kingdom, in cooperation with the IAEA, the International Maritime Organization and the World Nuclear Transport Institute. PATRAM 2010 will cover a wide range of packaging and transportation topics and issues including design and certification of packages, radiation protection, liability and insurance and public interface and outreach. The EM-45 staff and contractors have submitted 8 papers encompassing significant aspects of EM packaging and transportation operations including waste characterization process improvement, commodity flow surveys, transport emergency preparedness, developing a new radiation and surface contamination measurement process standard, package tracking through a radio frequency identification system, shipment denial issue and the safe transportation and disposal of uranium mill tailings in the MOAB project. The paper selection committee accepted all EM-45 papers and these papers will be presented at PATRAM 2010 during presentation or in poster sessions. Please visit the PATRAM 2010 web site for more information: <http://www.patram2010.org/>